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10/674,977	09/30/2003	Jeffrey Douglas Brown	AUS920030611US1	4952

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EXAMINER	
GREY, CHRISTOPHER P	

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2474	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/674,977	BROWN ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER P. GREY	2474	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/01/09*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,17-28 and 33-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,17-28 and 33-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In view of applicant's amendment filed on 7/01/09, the status of the application is still pending with respect to claims 1-3, 17-28 and 33-36.

Response to Arguments

2. Applicant's arguments filed on 7/01/09 have been fully considered but they are not persuasive.

Regarding claims 1, 3 and 24, The applicant argued that the cited art does not specifically disclose maintain a local bandwidth management table comprising a local token count for each of a plurality of classes of source entities, wherein the source entities are application programs (see page 12 of the applicant's remarks).

The examiner maintains the rejection of claims 1, 2 and 24, wherein Voellm shows in fig 3 a table of client side information equivalent to a local bandwidth management table, which comprises a local client credit/token count of each client, where the client is equivalent to a source entity. Bly is introduced to show that each client may have a specified class. In response to the remarks pertaining to the source entities being application programs, the examiner notes that no where within the claim is this limitation specified (no mention of application programs), and that limitations from the specification are not read into the claims.

The applicant also argued that the cited art does not specifically disclose the plurality of load shapers is further configured to request a token for the class of the

source entity from the bandwidth management controller in response to the transmission, Where Voellm keeps track of transaction requests by a client computer rather than software application source entities (see page 12 of the applicants remarks).

In response to the applicants remarks that Voellm keeps track of transaction requests by a client computer rather than software application source entities, the examiner notes that no where within the claim is this limitation specified (no mention of software application source entities), and that limitations from the specification are not read into the claims. Furthermore, Voellm discloses in response to having to send a transmission, including a hint (request) from the client (load shaper) and sending this to the server (where the rejection of claim 1 shows the server having a management system for the credits, see Para 0029 for hint and transmission of such a message). The applicant claims in response to the transmission, however the claim does not specify what transmission is referred to, where such a transmission can be that from the user sending data to the client, where the client receives such information and thus performs a transaction. Although Voellm discloses the transmission of this request in response to the transmission, Bly is introduced to clarify that a request for credit can be performed to a BMC (credit allocation circuit is equivalent to the Server side manager of Voellm and the BMC of the current application) in response to the transmission (where the claim does not specify what transmission is referred to, therefore the loop existing in fig 8 shows that the requesting in element 84 occurs in response to the transmission in element 90.

Regarding claim 2, 17-23, 25-28, The applicant depends on the arguments of claims 1, 3 and 24 for all other claims, so therefore in response, these other claims are addressed above.

Regarding claims 33-36, Newly added claims 33-36 are now addressed below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 3, 18, 19, 20, 22, 23, 24, 25, 27, 28, 33, are rejected under 34 U.S.C. 103(a) as being unpatentable over Voellm et al. (US 2004/0267932) in view of Bly et al. (US 20040042399), hereinafter referred to as Bly.

Regarding claim 1, Voellm discloses a plurality of load shapers **(fig 2, where each client shapes its load based on credit messages from the server as indicated in Para 0031)** configured to:

maintain a local bandwidth management table **(fig 3, 320 shows table with credits used info)** comprising a local token count **(fig 3, credits used)** for each source entities **(fig 1, where each client A-C is equivalent to a source entity)**;

receive a data packet from a source entity **(Para 0029, client receives a new request to perform a transaction)** transmit the data packet over a multiplexed communication path **(fig 2, where the clients used the credits that are allocated to the connection to send data tot eh buffers of the server, and Para 0021 supports an protocol, which includes a multiplexing protocol)** if the local token count of the source entity is at least one **(Para 0026, where the client needs a certain number of credits in order to send a request, where the limit cannot be exceeded)**; and

decrement the local token count of the source entity in the local bandwidth management table in response to the transmission **(fig 3, and Para 0026, where the credits used are maintained in the table of fig 3, thus a decrement is applied when each credit is used to send a request or data)**; and

Bandwidth Management Controller **(fig 2, server)** configured to:

maintain a centralized bandwidth management table (fig 5 shows an info table) comprising a base token count **(fig 5, where the combination of credit limits and credits used can be manipulated in order to achieve a base token count, and furthermore the claim does not define the structure or specification of such a count)** for each of the plurality of source entities **(fig 5, shows info for each client source)**,

Voellm does not specifically disclose one of the plurality of classes wherein a minimum bandwidth is reserved for each of the plurality of classes of source entities and the base token count increases at a rate corresponding to the minimum bandwidth; and

wherein: the plurality of load shapers is further configured to request a token for the class of the source entity from the Bandwidth Management Controller in response to the transmission; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is at least one by: providing a token and decrementing the base token count for the class of the source entity.

Bly discloses one of the plurality of classes **(Para 0038, high precedence versus best effort and Para 0042 for classification of incoming traffic)** wherein a minimum bandwidth **(Para 0039 teaches a minimum amount of credit, where credits define the amount of BW)** is reserved for each of the plurality of classes of source entities **(Para 0042 teaches the queues being classified dependent on the classified incoming traffic)** and the base token count increases at a rate corresponding to the minimum bandwidth **(Para 0039, where credits are allocated from the burst group allocation table which holds the number of base token counts as shown in figs 7 and 8, where the allocation is based on a minimum guaranteed BW);** and wherein:

the plurality of load shapers **(load shapers are shown within VoeIIm)** is further configured to request a token for the class of the source entity **(Para 0043 shows requesting credit/BW)** from the Bandwidth Management Controller **(Para 0043, request is made to credit allocation circuit which is made equivalent to a BMC shown in fig 4)** in response to the transmission **(fig 8, where a loop exists, thus the request of 84 is made after a transmission in 90 as a loop exists)**;

and the Bandwidth Management Controller **(fig 3 shows burst group allocation 51 equivalent to BMC)** further configured to respond to the request **(fig 8, 86 shows response)** if the base token count for the class of the source entity is at least one by: providing a token **(fig 8, burst group assigns credit from burst group allocation table and Para 0030 shows that allocation is made only if the allocation table has any credits available, thus the amount of credits must be more than 1)** and decrementing the base token count for the class of the source entity **(fig 4 shows a burst allocation table which keeps a record of the allocation of burst group, therefore when the credits are allocated, this allocation is noted/decremented from the bandwidth allocation table).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the client/server credit allocation scheme of Voellm, as taught by Bly, since stated in Para 0002-0004 that such a modification would improve the lack of scalability, cost per queue for the shaping and the ability to shape traffic.

Regarding claim 2, Voellm does not specifically disclose the centralized bandwidth management table further comprises a standby token count for each of the plurality of classes of source entities; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity.

Bly discloses the centralized bandwidth management table further comprises a standby token count for each of the plurality of classes of source entities; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity (Para 0039 discusses unused credit which can be made equivalent to standby tokens, i.e. Para 0030 shows that request are made to the burst groups/classes, where credits are allocated if the burst group has credit to give, therefore one skilled in the art can appreciate that when only 1 credit remains, this 1 credit is equivalent to a standby token, thus 1 when 1 credit remains, 0 base tokens are present and 1 standby token exists).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the client/server credit allocation scheme of Voellm, as taught by Bly, since stated in Para 0002-0004 that such a modification would improve the lack of scalability, cost per queue for the shaping and the ability to shape traffic.

Regarding claim 3, Voellm discloses a plurality of load shapers **(fig 2, where each client shapes its load based on credit messages from the server as indicated in Para 0031)** configured to:

maintain a local bandwidth management table **(fig 3, 320 shows table with credits used info)** comprising a local token count **(fig 3, credits used)** for each source entities **(fig 1, where each client A-C is equivalent to a source entity)**;

receive a data packet from a source entity **(Para 0029, client receives a new request to perform a transaction)** transmit the data packet over a multiplexed communication path **(fig 2, where the clients used the credits that are allocated to the connection to send data tot eh buffers of the server, and Para 0021 supports an protocol, which includes a multiplexing protocol)** if the local token count of the source entity is at least one **(Para 0026, where the client needs a certain number of credits in order to send a request, where the limit cannot be exceeded)**; and

decrement the local token count of the source entity in the local bandwidth management table in response to the transmission **(fig 3, and Para 0026, where the credits used are maintained in the table of fig 3, thus a decrement is applied when each credit is used to send a request or data)**; and

Bandwidth Management Controller **(fig 2, server)** configured to:

maintain a centralized bandwidth management table (fig 5 shows an info table) comprising a base token count **(fig 5, where the combination of credit limits and credits used can be manipulated in order to achieve a base token count, and furthermore the claim does not define the structure or specification of such a count)** for each of the plurality of source entities **(fig 5, shows info for each client source)**,

Voellm does not specifically disclose one of the plurality of classes wherein a minimum bandwidth is reserved for each of the plurality of classes of source entities and the base token count increases at a rate corresponding to the minimum bandwidth; and

wherein: the plurality of load shapers is further configured to request a token for the class of the source entity from the Bandwidth Management Controller in response to the transmission; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is at least one by: providing a token and decrementing the base token count for the class of the source entity.

Bly discloses one of the plurality of classes **(Para 0038, high precedence versus best effort and Para 0042 for classification of incoming traffic)** wherein a minimum bandwidth **(Para 0039 teaches a minimum amount of credit, where credits define the amount of BW)** is reserved for each of the plurality of classes of source entities **(Para 0042 teaches the queues being classified dependent on the classified incoming traffic)** and the base token count increases at a rate corresponding to the minimum bandwidth **(Para 0039, where credits are allocated from the burst group allocation table which holds the number of base token counts as shown in figs 7 and 8, where the allocation is based on a minimum guaranteed BW);** and wherein:

the plurality of load shapers **(load shapers are shown within VoeIIm)** is further configured to request a token for the class of the source entity **(Para 0043 shows requesting credit/BW)** from the Bandwidth Management Controller **(Para 0043, request is made to credit allocation circuit which is made equivalent to a BMC shown in fig 4)** in response to the transmission **(fig 8, where a loop exists, thus the request of 84 is made after a transmission in 90 as a loop exists)**;

and the Bandwidth Management Controller **(fig 3 shows burst group allocation 51 equivalent to BMC)** further configured to respond to the request **(fig 8, 86 shows response)** if the base token count for the class of the source entity is at least one by: providing a token **(fig 8, burst group assigns credit from burst group allocation table and Para 0030 shows that allocation is made only if the allocation table has any credits available, thus the amount of credits must be more than 1)** and decrementing the base token count for the class of the source entity **(fig 4 shows a burst allocation table which keeps a record of the allocation of burst group, therefore when the credits are allocated, this allocation is noted/decremented from the bandwidth allocation table).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the client/server credit allocation scheme of Voellm, as taught by Bly, since stated in Para 0002-0004 that such a modification would improve the lack of scalability, cost per queue for the shaping and the ability to shape traffic.

Regarding claim 18, Voellm discloses wherein the local token count for each of the plurality of classes of source entities has a maximum count of two tokens (Para 0028, where the minimum number that can be assigned to the negotiable limit of the credits is 2).

Regarding claim 19, Voellm discloses wherein the plurality of load shapers is further configured to maintain a count of outstanding requests for tokens **(Para** 0026 shows outstanding transaction requests).

Regarding claim 20, Voellm does not specifically disclose the centralized bandwidth management table further comprises a standby token count for each of the plurality of classes of source entities; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity.

Bly discloses the centralized bandwidth management table further comprises a standby token count for each of the plurality of classes of source entities; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity (Para 0039 discusses unused credit which can be made equivalent to standby tokens, i.e. Para 0030 shows that request are made to the burst groups/classes, where credits are allocated if the burst group has credit to give, therefore one skilled in the art can appreciate that when only 1 credit remains, this 1 credit is equivalent to a standby token, thus 1 when 1 credit remains, 0 base tokens are present and 1 standby token exists).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the client/server credit allocation scheme of Voellm, as taught by Bly, since stated in Para 0002-0004 that such a modification would

improve the lack of scalability, cost per queue for the shaping and the ability to shape traffic.

Regarding claim 22, Voellm discloses wherein the local token count for each of the plurality of classes of source entities has a maximum count of two tokens (Para 0028, where the minimum number that can be assigned to the negotiable limit of the credits is 2).

Regarding claim 23, Voellm discloses wherein the plurality of load shapers is further configured to maintain a count of outstanding requests for tokens **(Para** 0026 shows outstanding transaction requests).

Regarding claim 24, Voellm discloses computer program product and code (Para 0016-0020) for performing the functions associated with:

a plurality of load shapers **(fig 2, where each client shapes its load based on credit messages from the server as indicated in Para 0031)** configured to:

maintain a local bandwidth management table **(fig 3, 320 shows table with credits used info)** comprising a local token count **(fig 3, credits used)** for each source entities **(fig 1, where each client A-C is equivalent to a source entity)**;

receive a data packet from a source entity **(Para 0029, client receives a new request to perform a transaction)** transmit the data packet over a multiplexed communication path **(fig 2, where the clients used the credits that are allocated to the connection to send data tot eh buffers of the server, and Para 0021 supports an protocol, which includes a multiplexing protocol)** if the local token count of the

source entity is at least one **(Para 0026, where the client needs a certain number of credits in order to send a request, where the limit cannot be exceeded)**; and

decrement the local token count of the source entity in the local bandwidth management table in response to the transmission **(fig 3, and Para 0026, where the credits used are maintained in the table of fig 3, thus a decrement is applied when each credit is used to send a request or data)**; and

Bandwidth Management Controller **(fig 2, server)** configured to:

maintain a centralized bandwidth management table (fig 5 shows an info table) comprising a base token count **(fig 5, where the combination of credit limits and credits used can be manipulated in order to achieve a base token count, and furthermore the claim does not define the structure or specification of such a count)** for each of the plurality of source entities **(fig 5, shows info for each client source)**,

Voellm does not specifically disclose one of the plurality of classes wherein a minimum bandwidth is reserved for each of the plurality of classes of source entities and the base token count increases at a rate corresponding to the minimum bandwidth; and wherein: the plurality of load shapers is further configured to request a token for the class of the source entity from the Bandwidth Management Controller in response to the transmission; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is at

least one by: providing a token and decrementing the base token count for the class of the source entity.

Bly discloses one of the plurality of classes **(Para 0038, high precedence versus best effort and Para 0042 for classification of incoming traffic)** wherein a minimum bandwidth **(Para 0039 teaches a minimum amount of credit, where credits define the amount of BW)** is reserved for each of the plurality of classes of source entities **(Para 0042 teaches the queues being classified dependent on the classified incoming traffic)** and the base token count increases at a rate corresponding to the minimum bandwidth **(Para 0039, where credits are allocated from the burst group allocation table which holds the number of base token counts as shown in figs 7 and 8, where the allocation is based on a minimum guaranteed BW);** and wherein:

the plurality of load shapers **(load shapers are shown within Voellm)** is further configured to request a token for the class of the source entity **(Para 0043 shows requesting credit/BW)** from the Bandwidth Management Controller **(Para 0043, request is made to credit allocation circuit which is made equivalent to a BMC shown in fig 4)** in response to the transmission **(fig 8, where a loop exists, thus the request of 84 is made after a transmission in 90 as a loop exists)**;

and the Bandwidth Management Controller **(fig 3 shows burst group allocation 51 equivalent to BMC)** further configured to respond to the request **(fig 8, 86 shows response)** if the base token count for the class of the source entity is at least one by: providing a token **(fig 8, burst group assigns credit from burst group**

allocation table and Para 0030 shows that allocation is made only if the allocation table has any credits available, thus the amount of credits must be more than 1) and decrementing the base token count for the class of the source entity **(fig 4 shows a burst allocation table which keeps a record of the allocation of burst group, therefore when the credits are allocated, this allocation is noted/decremented from the bandwidth allocation table).**

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the client/server credit allocation scheme of Voellm, as taught by Bly, since stated in Para 0002-0004 that such a modification would improve the lack of scalability, cost per queue for the shaping and the ability to shape traffic.

Regarding claim 25, Voellm does not specifically disclose the centralized bandwidth management table further comprises a standby token count for each of the plurality of classes of source entities; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity.

Bly discloses the centralized bandwidth management table further comprises a standby token count for each of the plurality of classes of source entities; and the Bandwidth Management Controller is further configured to respond to the request if the base token count for the class of the source entity is zero and the standby token count

for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity (Para 0039 discusses unused credit which can be made equivalent to standby tokens, i.e. Para 0030 shows that request are made to the burst groups/classes, where credits are allocated if the burst group has credit to give, therefore one skilled in the art can appreciate that when only 1 credit remains, this 1 credit is equivalent to a standby token, thus 1 when 1 credit remains, 0 base tokens are present and 1 standby token exists).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the client/server credit allocation scheme of Voellm, as taught by Bly, since stated in Para 0002-0004 that such a modification would improve the lack of scalability, cost per queue for the shaping and the ability to shape traffic.

Regarding claim 27, Voellm discloses wherein the local token count for each of the plurality of classes of source entities has a maximum count of two tokens (Para 0028, where the minimum number that can be assigned to the negotiable limit of the credits is 2).

Regarding claim 28, Voellm discloses wherein the plurality of load shapers is further configured to maintain a count of outstanding requests for tokens **(Para** 0026 shows outstanding transaction requests).

Regarding claim 33, Voellm discloses a plurality of processor units, wherein each of said plurality of processor units (fig 1, see processing unit) is associated with a respective one of said plurality of load shapers (fig 1, where fig 1 is a

diagram of the client, where each client of fig 2 has the components including the processing unit of fig 1);

a bus interconnecting each of said plurality of processor units (Para 0018 shows that a wired connection can connects the computing devices to one another, where such a wired connection is equivalent to a bus);

a display device (fig 2, each client is accompanied by a monitor for display) connected to said plurality of processor units (fig 1, each client contains processing units) and configured to display data from each of said plurality of processor units (Para 0017 shows that the display of data is well known in the art).

Regarding claim 34, wherein said method of bandwidth management is performed in a multi-processor system comprising a plurality of processor units (fig 1 and 2 shows that a plurality of client devices exist, where a plurality of clients have processing units within); and

wherein said local bandwidth management table is one of a plurality of local bandwidth management tables (see fig 3 for local table) each being associated with a respective one of said plurality of processor units (fig 1, where each processor unit is associated with each client, where each client has such a table for storing local info).

5. Claims 17, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voellm et al. (US 2004/0267932) in view of Bly et al. (US 20040042399), hereinafter referred to as Bly in view of Jeffries (US 20040062259).

Regarding claim 17, The combined teachings of Voellm and Bly do not specifically disclose linearly increase the standby token count for each of the plurality of classes of source entities when the communication path is not congested; and exponentially decrease the standby token count for each of the plurality of source entities when the communication path is congested.

Jeffries discloses linearly increase the standby token count for each of the plurality of classes of source entities when the communication path is not congested; and exponentially decrease the standby token count for each of the plurality of source entities when the communication path is congested (Para 0003 teaches increasing the token count continuously, and also decreasing the token count dependent on a congestion level).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Voellm and Bly, since stated in Para 0003 that such a modification will avoid adverse conditions by managing data packet queues, Where excessive queue lengths are avoided.

Regarding claim 21, The combined teachings of Voellm and Bly do not specifically disclose linearly increase the standby token count for each of the plurality of classes of source entities when the communication path is not congested; and exponentially decrease the standby token count for each of the plurality of source entities when the communication path is congested.

Jeffries discloses linearly increase the standby token count for each of the plurality of classes of source entities when the communication path is not congested; and exponentially decrease the standby token count for each of the plurality of source entities when the communication path is congested (Para 0003 teaches increasing the token count continuously, and also decreasing the token count dependent on a congestion level).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Voellm and Bly, since stated in Para 0003 that such a modification will avoid adverse conditions by managing data packet queues, Where excessive queue lengths are avoided.

Regarding claim 26, The combined teachings of Voellm and Bly do not specifically disclose linearly increase the standby token count for each of the plurality of classes of source entities when the communication path is not congested; and exponentially decrease the standby token count for each of the plurality of source entities when the communication path is congested.

Jeffries discloses linearly increase the standby token count for each of the plurality of classes of source entities when the communication path is not congested; and exponentially decrease the standby token count for each of the plurality of source entities when the communication path is congested (Para 0003 teaches increasing the token count continuously, and also decreasing the token count dependent on a congestion level).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Voellm and Bly, since stated in Para 0003 that such a modification will avoid adverse conditions by managing data packet queues, Where excessive queue lengths are avoided.

6. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voellm et al. (US 2004/0267932) in view of Bly et al. (US 20040042399) in view of Berger et al. (US 5274644), hereinafter referred to as Berger.

Regarding claim 35, The combined teachings of Voellm and Bly do not specifically disclose responding to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity.

Berger discloses responding to the request if the base token count for the class of the source entity is zero and the standby token count for the class of the source entity is at least one by: providing a token and decrementing the standby token count for the class of the source entity (Col 7 lines 4560, where if the token bank is empty of credits upon a request, a spare bank's credits are requested and issued given that there is 1 or more credits available.

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Voellm and Bly, as taught

by Berger, since stated in Col 1 lines 10-15, that such a modification will provide a mechanism to fairly and efficiently allocate common resources to multiclass traffic.

Regarding claim 36, The combined teachings of Voellm and Bly do not specifically disclose linearly increasing the standby token count for each of the plurality of classes of source entities when the communication path is not congested, and exponentially decreasing the standby token count for each of the plurality of source entities when the communication path is congested.

Berger discloses linearly increasing the standby token count for each of the plurality of classes of source entities when the communication path is not congested (Col 6 lines 10-21, where the spare bank is filled when the local bank is full, where when the local bank is full there is no congestion), and exponentially decreasing the standby token count for each of the plurality of source entities when the communication path is congested (Col 7 lines 45-60, where the spare bank is decremented when the local bank is empty, where the emptying of the local bank indicates that there is congestion ass all the credits have been used up).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Voellm and Bly, as taught by Berger, since stated in Col 1 lines 10-15, that such a modification will provide a mechanism to fairly and efficiently allocate common resources to multiclass traffic.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER P. GREY whose telephone number is (571)272-3160. The examiner can normally be reached on 10AM-7:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moe Aung can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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